

TA-H3800

SERVICE MANUAL

AEP Model
UK Model



TA-H3800 is the amplifier section in MHC-3800.

COMPACT
disc
DIGITAL AUDIO

SPECIFICATIONS

General

Power requirements

European model:
220 V — 230 V, 50/60 Hz
U.K. model:
240 V, 50 Hz

Power consumption

170 watts

Dimensions

Approx. 225 x 390 x 280 mm
(w/h/d)
(8⁷/₈ x 15³/₈ x 11¹/₈ inches)
incl. projecting parts and
controls

Mass

Approx. 11.7 kg (25 lb 13 oz)

Supplied accessories

Remote Commander (1)
(RM-S380)
Sony SUM-3 (NS)
batteries (2)
AM loop antenna (1)
FM antenna (1)
AC power cord (2)
Flat cord (1)
Speaker cord (except for
Europe and U.K.) (2)

Continuous RMS power output

50 + 50 watts
(6 ohms at 1 kHz, DIN)
65 + 65 watts
(6 ohms at 1 kHz, 5% THD)

Music power output

130 + 130 watts
(6 ohms at 1 kHz, 10% THD)

Inputs

MIX MIC (minijack)
sensitivity: 1 mV,
impedance: 600 ohms

Outputs

HEADPHONES
(stereo minijack)
accepts headphones of
8 ohms or more.
SPEAKER
accepts speakers of 6 to
16 ohms.
SURROUND SPEAKER
accepts speakers of 16
ohms.

Design and specifications subject to change
without notice.

Note

This appliance conforms with EEC Directive
87/308/EEC regarding interference
suppression.

POWER AMPLIFIER
SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

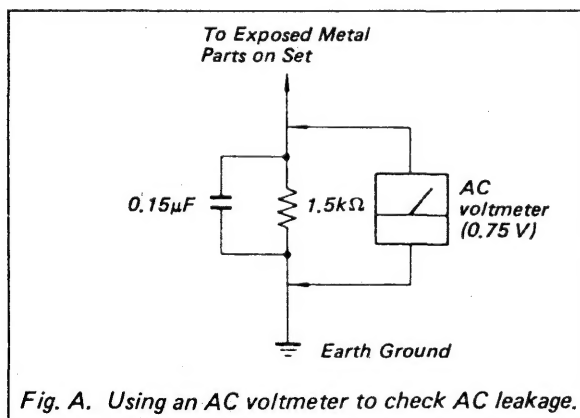




Fig. A. Using an AC voltmeter to check AC leakage.

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

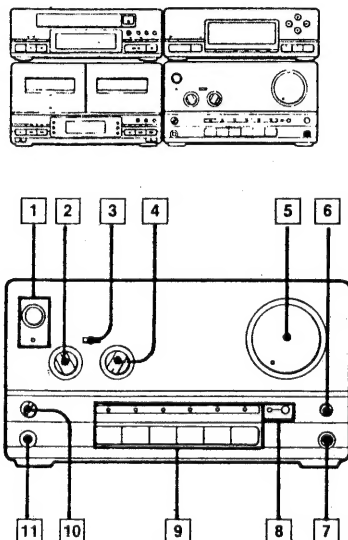
SECTION 1 GENERAL

Parts Identification

Refer to the pages indicated in () for use of the buttons.

This section extracted from instruction manual.

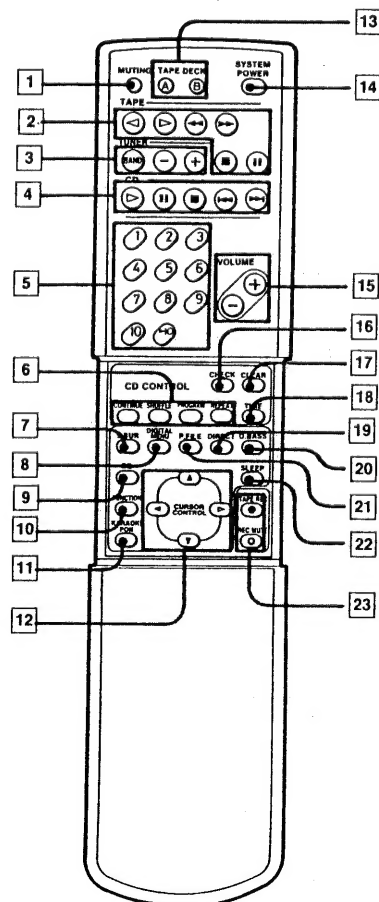
F



Amplifier Section F

- 1 SYSTEM POWER button and ON/STANDBY indicator
The indicator remains lit as long as the AC power cord is connected to the wall outlet.
- 2 FREQUENCY control (32)
- 3 DYNAMIC BASS SYSTEM button (32)
- 4 LEVEL (Bass level) control (32)
- 5 VOLUME control (32)
- 6 Remote control sensor
- 7 HEADPHONES jack (stereo minijack)
- 8 MUTING button and indicator (32)
- 9 FUNCTION selector and indicators
- 10 MIC (microphone) LEVEL control
- 11 MIX MIC (microphone) input jack (minijack).

G



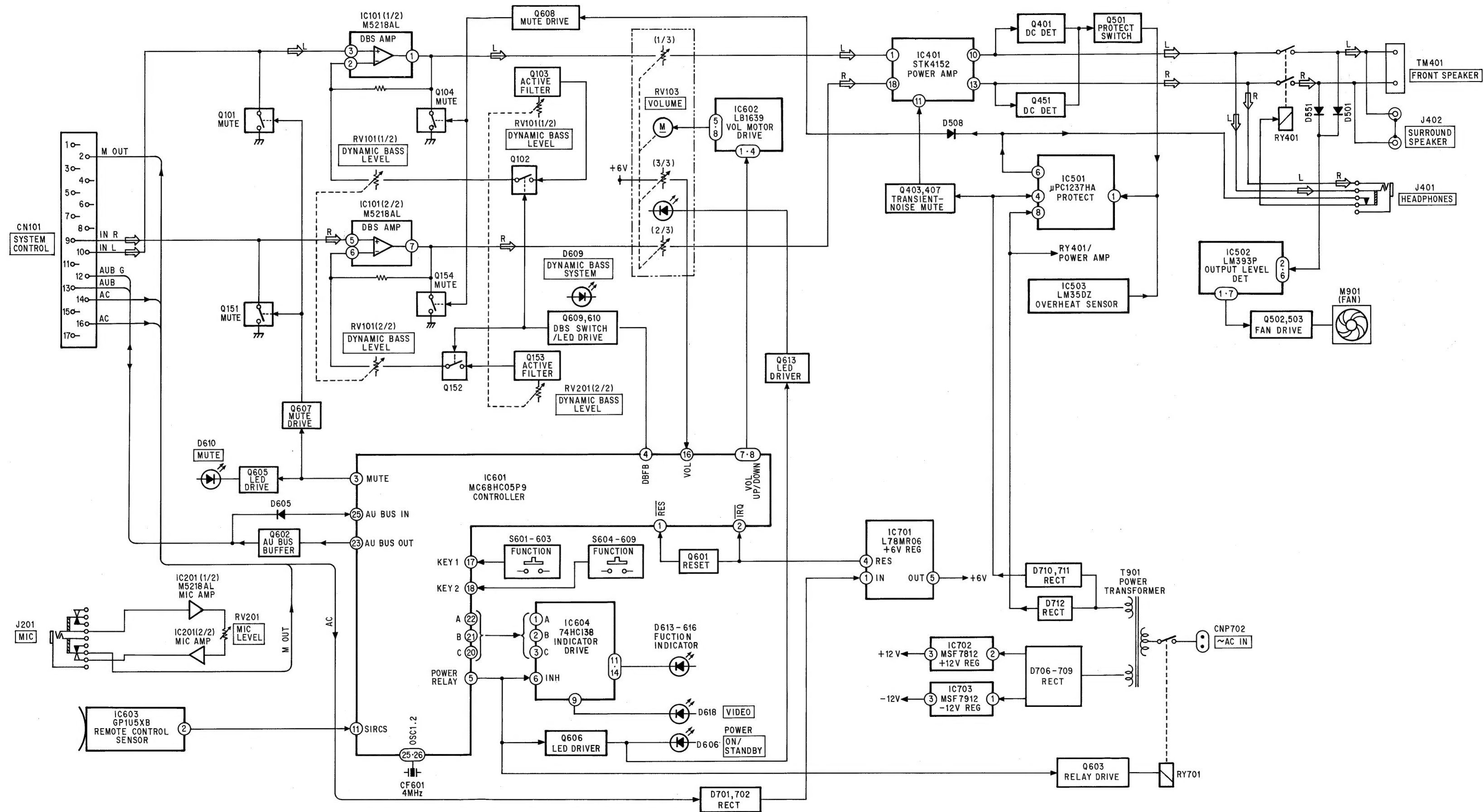
Remote Commander G

- 1 MUTING button (32)
- 2 Cassette deck operation buttons
- 3 Tuner operation buttons
BAND button
-/+ button
- 4 CD player operation buttons
- 5 Tuner/CD player numeric buttons (36, 56)
- 6 CD playing mode buttons
- 7 S-SUR button (96)
- 8 DIGITAL MENU (Digital Sound Menu) button (90)
- 9 EQ button (94)
- 10 FUNCTION button
- 11 KARAOKE PON button (112)
- 12 CURSOR CONTROL buttons
- 13 TAPE DECK A/B buttons (58)
- 14 SYSTEM POWER button
- 15 VOLUME +/- buttons (32)
- 16 CHECK button (48)
- 17 CLEAR button (44, 48)
- 18 TIME button (38)
- 19 DIRECT button (90)
- 20 D. BASS button (32)
- 21 P. FILE button (20)
- 22 SLEEP button (108)
- 23 Recording operation buttons
TAPE REC ● button (64)
REC MUTE ○ button (66)

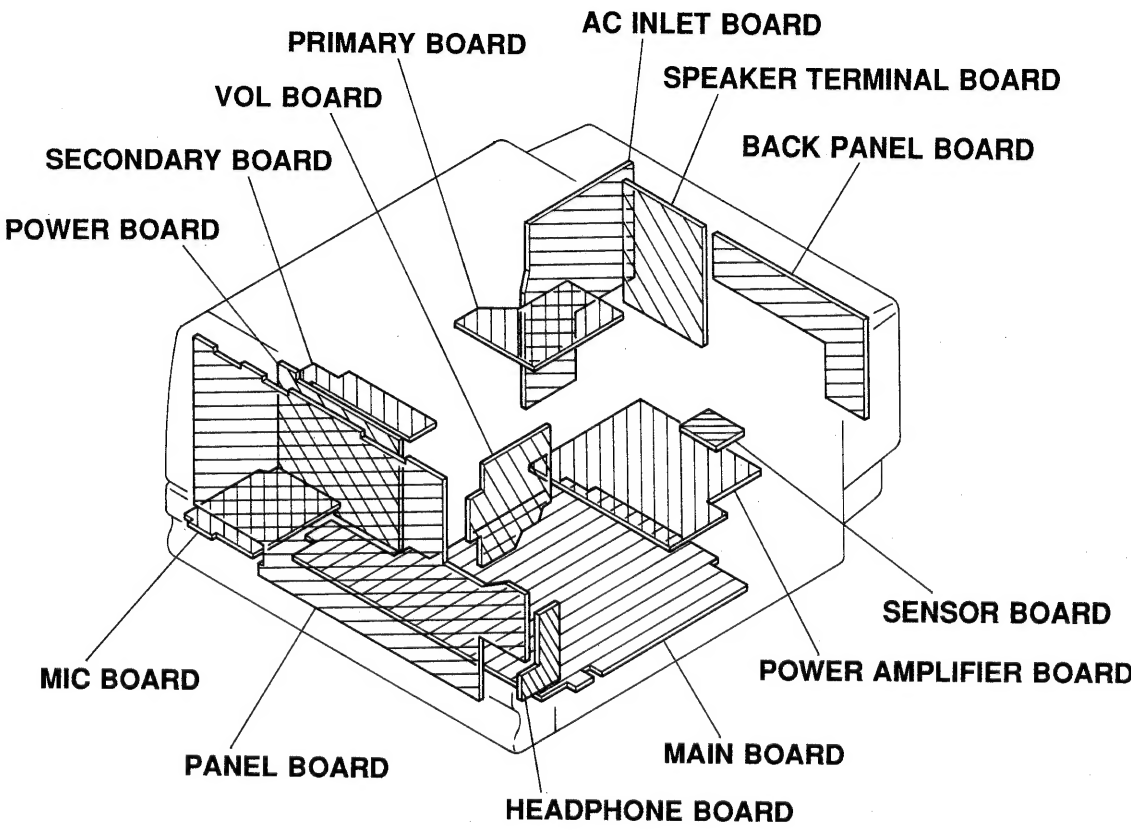
SECTION 2

DIAGRAMS

2-1. BLOCK DIAGRAMS



2-2. CIRCUIT BOARDS LOCATION



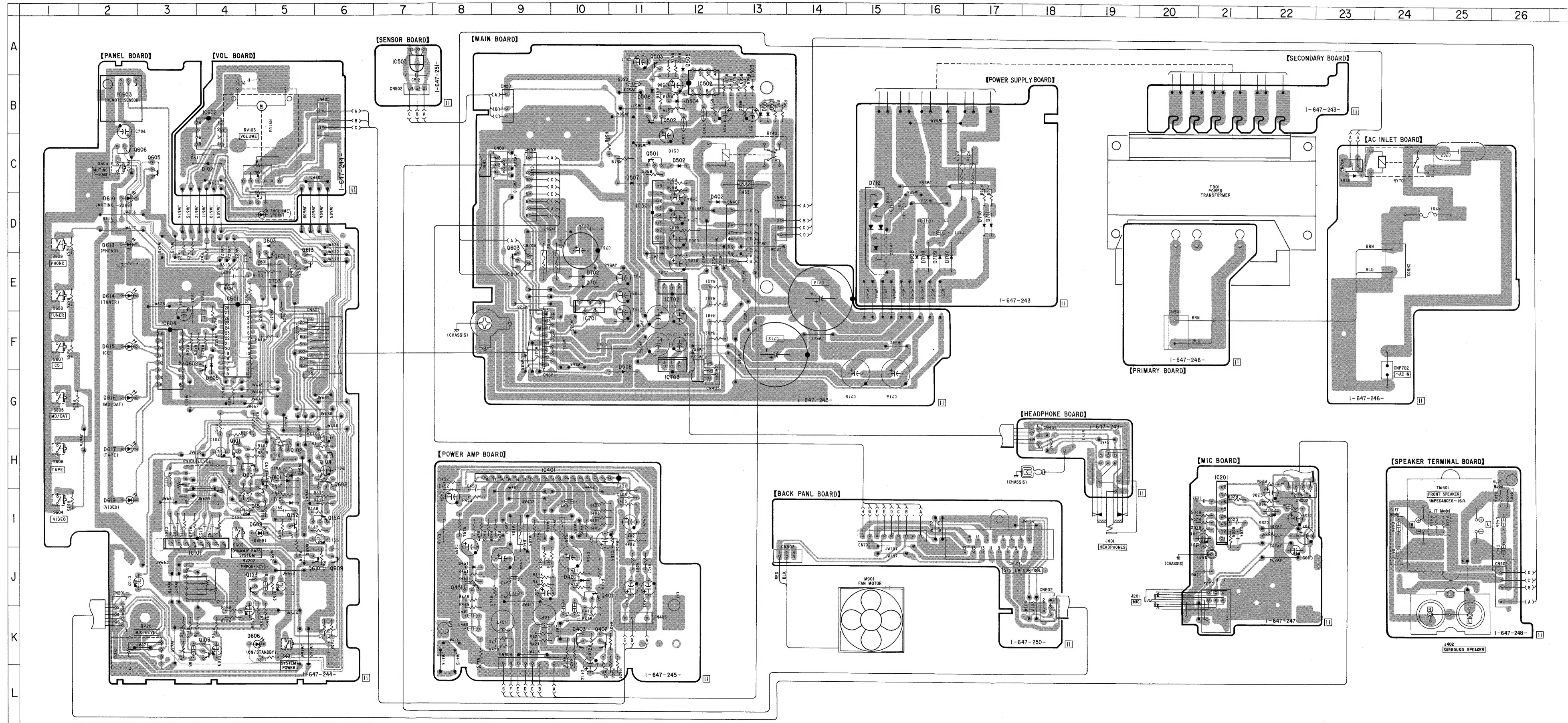
• Semiconductor Location

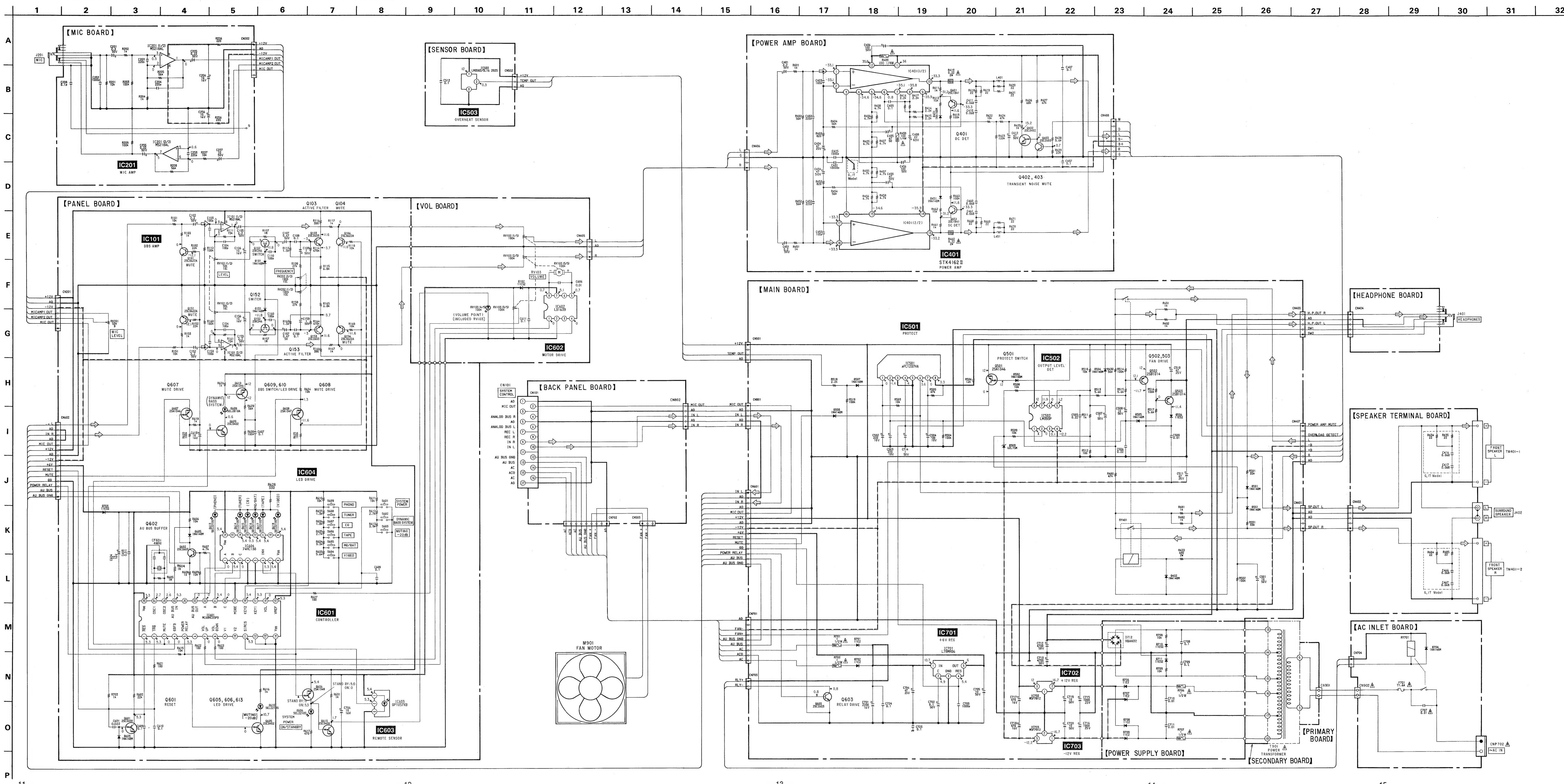
Ref. No.	Location	Ref. No.	Location
D101	H-5	IC101	J-3
D102	C-4	IC201	I-21
D151	I-5	IC401	H-9
D401	J-10	IC501	D-11
D402	D-12	IC502	B-12
D451	J-8	IC503	A-7
D501	B-13	IC601	F-4
D502	C-12	IC602	C-4
D503	B-13	IC603	B-2
D504	B-12	IC604	F-3
D505	A-12	IC701	F-10
D506	B-11	IC702	E-12
D507	C-11	IC703	G-12
D508	G-11		
D551	B-13	Q101	H-4
D603	E-5	Q102	H-5
D605	G-4	Q103	K-4
D606	K-4	Q104	H-6
D609	I-5	Q151	I-5
D610	D-2	Q152	I-5
D613	E-2	Q153	J-4
D614	E-2	Q154	I-6
D615	F-2	Q401	J-10
D616	G-2	Q402	K-10
D617	H-2	Q403	K-10
D618	I-2	Q451	J-8
D701	E-10	Q501	C-11
D702	E-10	Q502	B-11
D703	E-5	Q503	A-11
D704	C-23	Q601	E-5
D706	E-16	Q602	G-4
D707	E-16	Q603	E-9
D708	E-16	Q605	C-3
D709	E-16	Q606	C-2
D710	D-17	Q607	H-4
D711	D-17	Q608	I-6
D712	D-15	Q609	J-6
		Q610	J-6
		Q613	E-5

Note on Printed Wiring Boards:

- Note:
- : parts extracted from the component side.
 - : parts extracted from the component side.
 - ▨ : Pattern on the side which is seen.

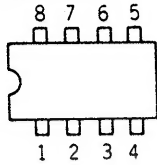
2-3. PRINTED WIRING BOARDS • Ref to page 16,17 for Semiconductor Lead Layout.





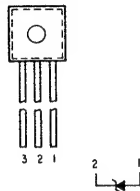
2-5. SEMICONDUCTOR LEAD LAYOUT

LB1639
μPC393C

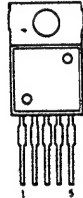


(Top view)

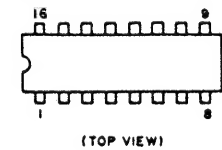
LM35DZ



L78MR06

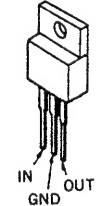


MC68HC05P9SC405644B
SN74HC138AN

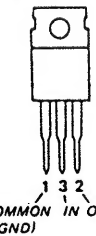


(TOP VIEW)

M5F7812L

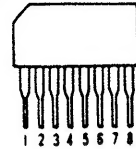


TA7912S

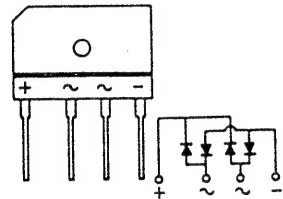


COMMON IN OUT
(GND)

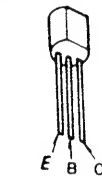
M5218AL
μPC1237HA



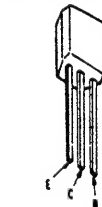
RBA-402



2SB1116



2SC2603-EF
2SC3622A-LK
DTA114ES
DTA144WS
DTC114ES
DTC124ES



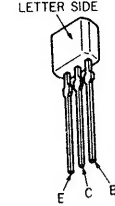
2SC1841-PAFAEA



2SK246GR3

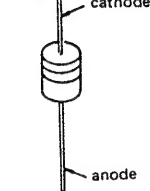


DTA124ES

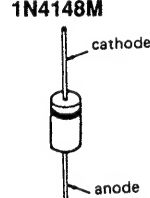


LETTER SIDE

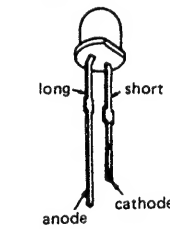
UZL-15M
11ES2



10E2
1N4148M

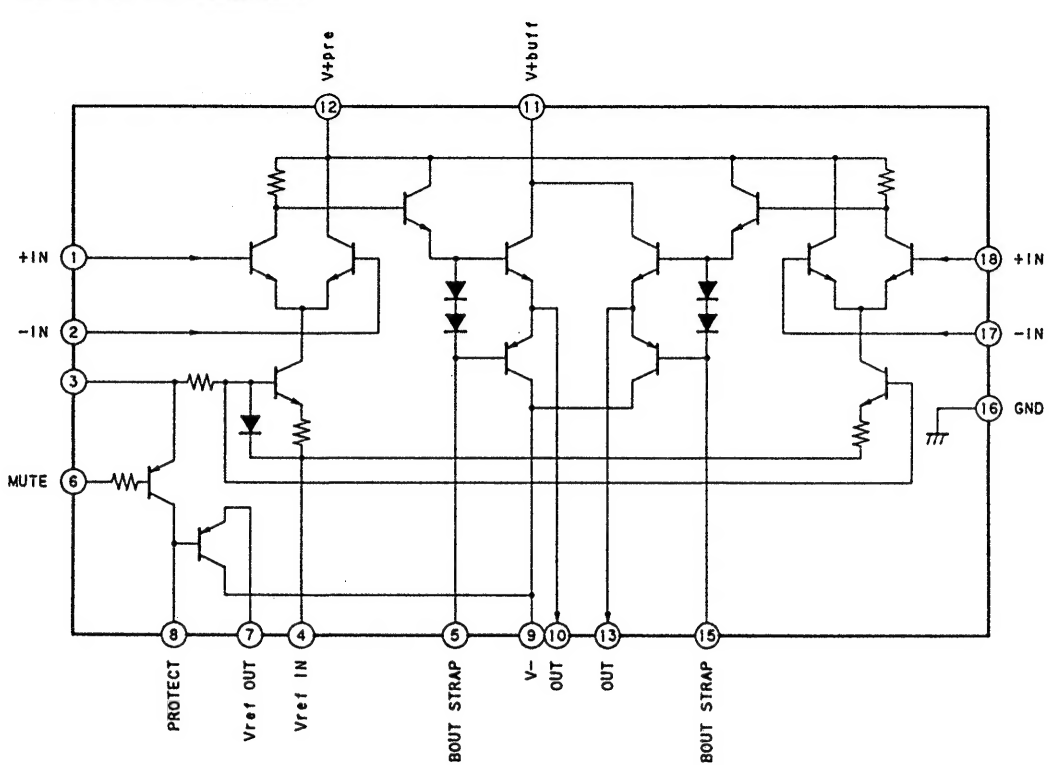


SEL2210S-CD
SEL2810A

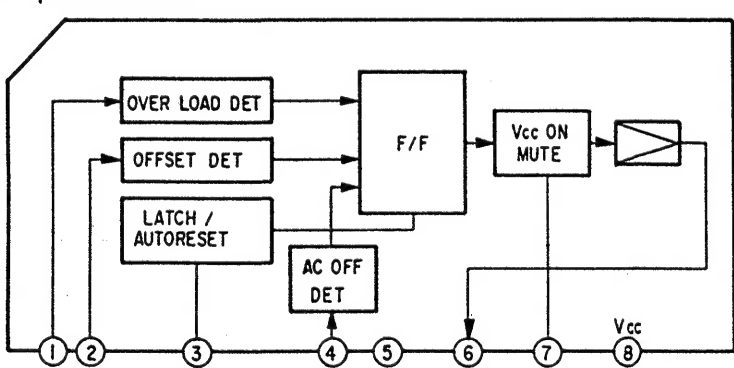


• IC Block Diagrams

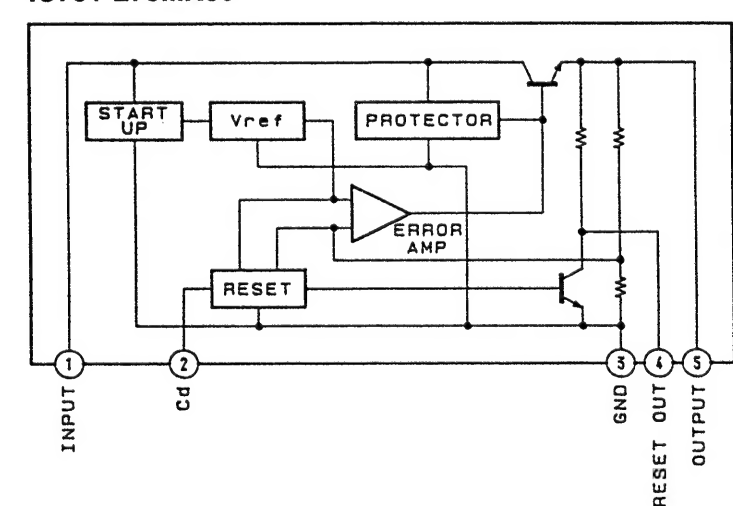
IC401 STK4152MK2K



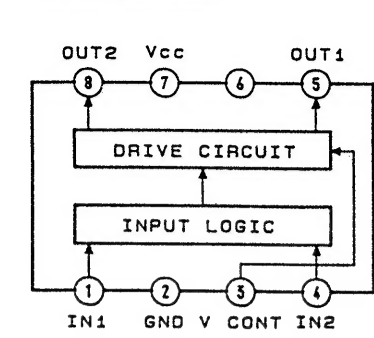
IC501 μPC1237HA



IC701 L78MR06



IC602 LB1639



SECTION 3

EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts

Example:

KNOB, BALANCE (WHITE) . . . (RED)

↑
Parts color.



↑
Cabinet's color

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

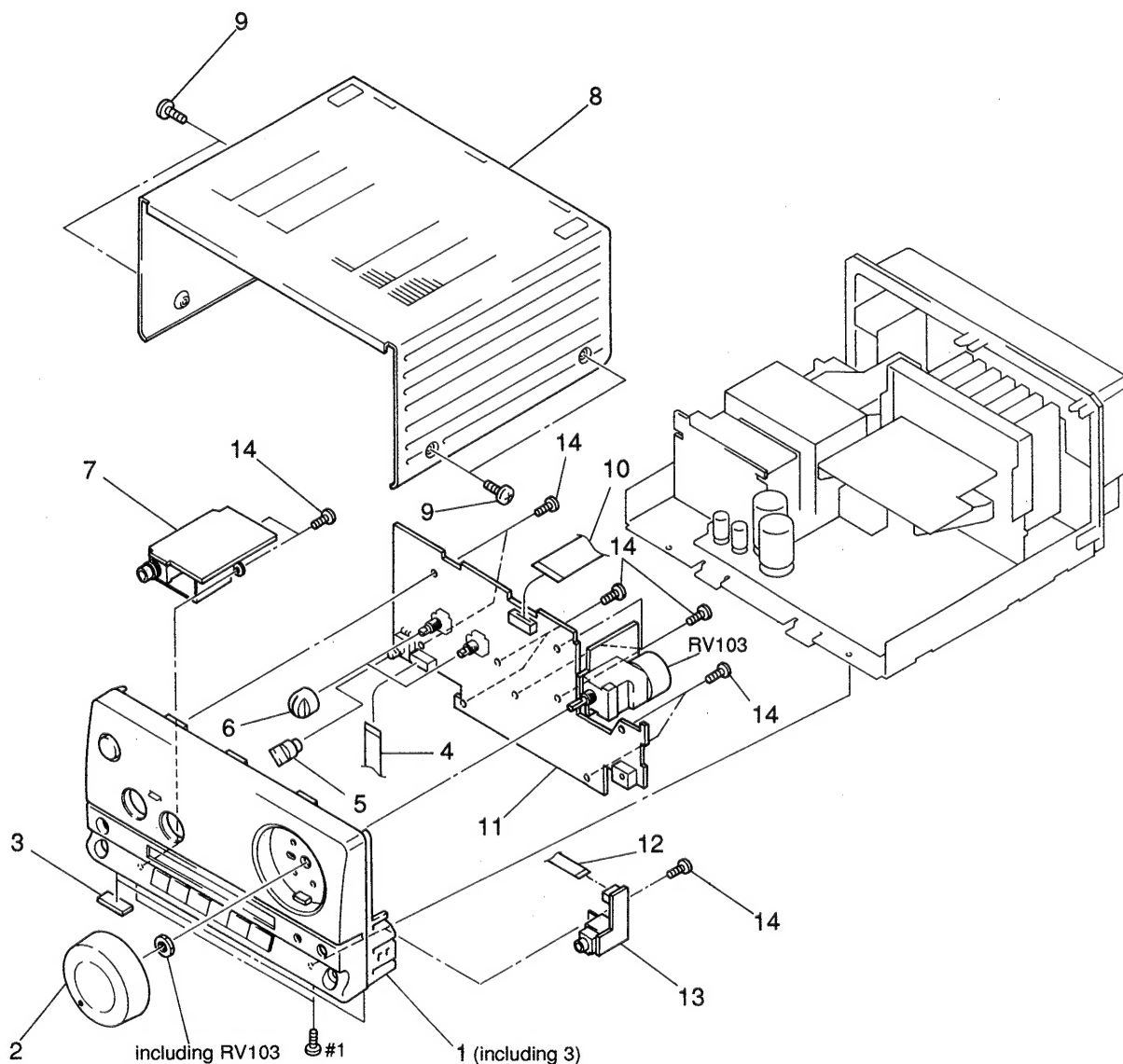
- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list is given in the last of this parts list.

- Italian, Germany model is abbreviated as IT, G.

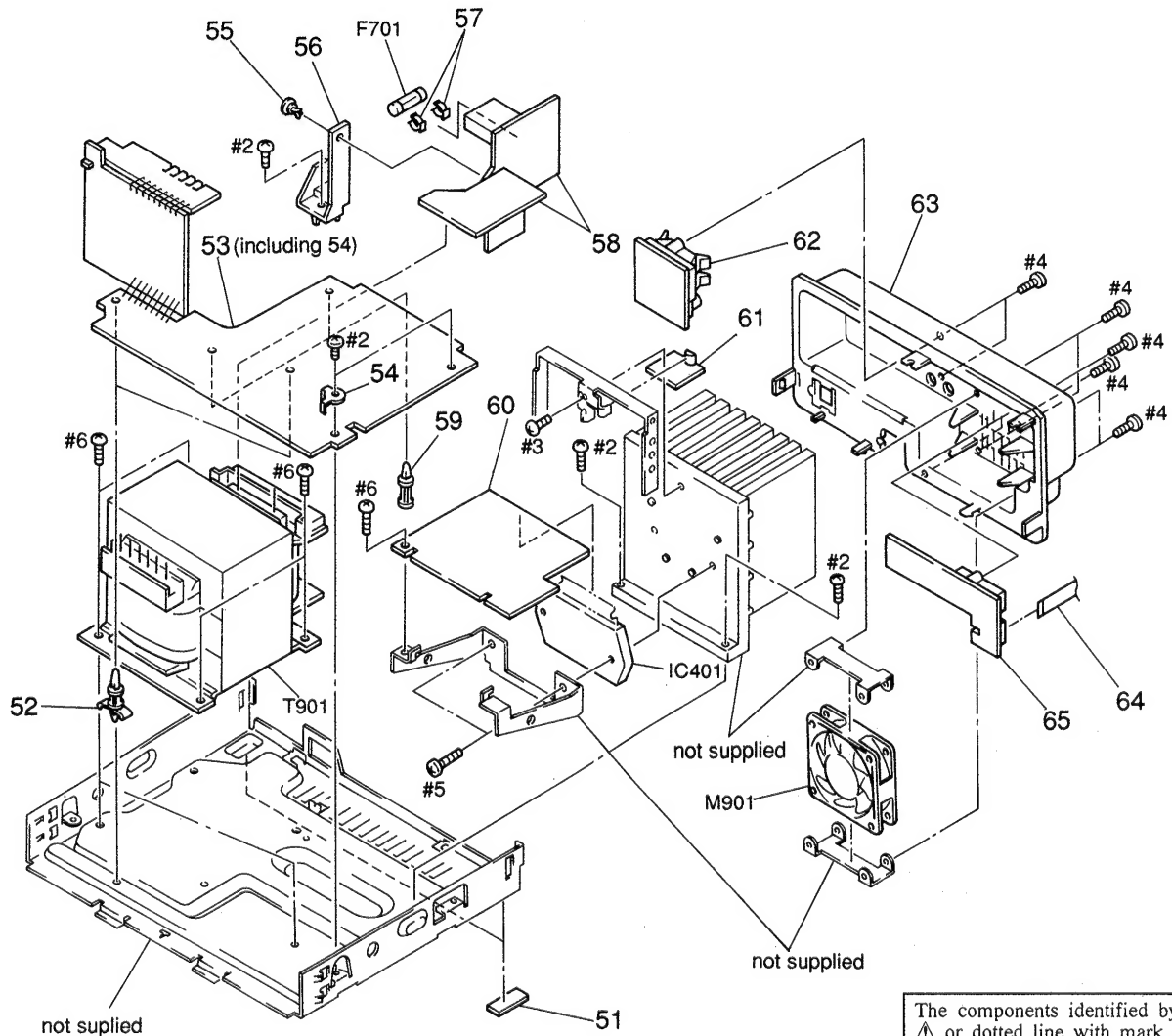
The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.



3-1. CASE AND FRONT PANEL ASSEMBLY






<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
1	X-4943-473-1	PANEL ASSY, FRONT		10	1-751-032-11	WIRE (FLAT TYPE) (15 CORE)	
2	X-4942-957-1	KNOB (VOLUME) ASSY		* 11	A-4360-229-A	PANEL BOARD, COMPLETE (AEP)	
3	4-930-336-31	FOOT (FELT)		*	A-4360-239-A	PANEL BOARD, COMPLETE (UK)	
4	1-590-033-11	WIRE, FLAT TYPE (7 CORE)		*	A-4360-243-A	PANEL BOARD, COMPLETE (G, IT)	
5	4-954-799-01	KNOB (MIC LEVEL)		12	1-575-662-11	WIRE, FLAT TYPE (5 CORE)	
6	4-954-800-01	KNOB (FREQUENCY/LEVEL)		* 13	1-647-249-11	HEADPHONE BOARD	
* 7	A-4360-230-A	MIC BOARD, COMPLETE (AEP, UK)		14	4-951-620-01	SCREW (2.6X8), +BVTP	
*	A-4360-244-A	MIC BOARD, COMPLETE (G, IT)		RV103	1-223-200-11	RES, VAR, CARBON 10K/100K/100K	
* 8	3-382-491-11	CASE				(VOLUME)	
9	3-363-099-21	SCREW (CASE 3 TP2)					

3-2. CHASSIS ASSEMBLY



The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
51	4-930-336-31	FOOT (FELT)		* 60	A-4360-247-A	POWER AMPLIFIER BOARD, COMPLETE (G, IT)	
* 52	4-924-098-11	HOLDER, PC BOARD		* 61	1-647-251-11	SENSOR BOARD	
* 53	A-4360-234-A	MAIN BOARD, COMPLETE (AEP)		* 62	1-647-248-11	SPEAKER TERMINAL BOARD	
* 54	A-4360-238-A	MAIN BOARD, COMPLETE (UK)		* 63	4-954-256-41	PANEL, BACK	
* 55	A-4360-242-A	MAIN BOARD, COMPLETE (G, IT)		* 64	1-751-023-11	WIRE (FLAT TYPE) (5 CORE)	
* 56	4-942-204-01	PLATE, GROUND		* 65	1-647-250-11	BACK PANEL BOARD	
* 57	4-812-134-11	RIVET NYLON, 3.5		 F701	1-532-259-00	FUSE, TIME-LAG (T1. 6A)	
* 58	4-954-242-01	BRACKET (IN)		IC401	8-749-900-24	IC STK4162MK2	
* 59	1-533-213-31	HOLDER FUSE		M901	1-541-953-11	MOTOR, DC FAN	
* 60	1-647-246-11	PRIMARY BOARD		 T901	1-423-531-11	TRANSFORMER, POWER (AEP, G, IT)	
* 54	3-669-610-00	SPACER		 T902	1-423-532-11	TRANSFORMER, POWER (UK)	
* 60	A-4360-235-A	POWER AMPLIFIER BOARD, COMPLETE (AEP)					
*	A-4360-240-A	POWER AMPLIFIER BOARD, COMPLETE (UK)					

SECTION 4

ELECTRICAL PARTS LIST

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

• Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.

• -XX, -X mean standardized parts, so they may have some difference from the original one.

• RESISTORS

All resistors are in ohms

METAL: Metal-film resistor

METAL OXIDE: Metal Oxide-film resistor

F: nonflammable

• Color Indication of Appearance Parts Example:

KNOB, BALANCE (WHITE) ... (RED)

↑
Parts color

↑
Cabinet's color

• Italian, Germany model is abbreviated as IT, G.

• Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• SEMICONDUCTORS

In each case, u: μ , for example:

uA...: μ A..., uPA...: μ PA...,

uPB...: μ PB..., uPC...: μ PC...,

uPD...: μ PD...

• CAPACITORS

uF: μ F

• COILS

uH: μ H

• Hardware (# mark) list is given in the last of this parts list.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		AC INLET BOARD *****		*	A-4360-234-A	MAIN BOARD, COMPLETE (AEP) *****	
*	1-533-213-31	HOLDER, FUSE		*	A-4360-238-A	MAIN BOARD, COMPLETE (UK) *****	
		< CAPACITOR >		*	A-4360-242-A	MAIN BOARD, COMPLETE (G, IT) *****	
Δ C707	1-161-744-00	CERAMIC 0.01uF 400V		*	3-309-144-31	HEAT, SINK	
		< CONNECTOR >		*	4-942-204-01	PLATE, GROUND	
* CN704	1-564-517-11	PLUG, CONNECTOR 2P				< CAPACITOR >	
Δ *CN902	1-751-206-21	LEAD (WITH CONNECTOR) (2 CORE)		C501	1-124-907-11	ELECT 10uF 20% 50V	
		< CNP >		C502	1-126-923-11	ELECT 220uF 20% 10V	
Δ CNP702	1-526-931-11	INLET, AC (AC IN)		C503	1-126-923-11	ELECT 220uF 20% 10V	
		< DIODE >		C504	1-124-443-00	ELECT 100uF 20% 10V	
D704	8-719-987-63	DIODE 1N4148M		C505	1-136-169-00	FILM 0.22uF 5% 50V	
		< RELAY >		C506	1-136-169-00	FILM 0.22uF 5% 50V	
RY701	1-515-720-11	RELAY		C507	1-124-903-11	ELECT 1uF 20% 50V	
*****				C508	1-124-907-11	ELECT 10uF 20% 50V	
*	1-647-250-11	BACK PANEL BOARD *****		C509	1-136-153-00	FILM 0.01uF 5% 50V	
		< CONNECTOR >		C510	1-124-477-11	ELECT 47uF 20% 25V	
* CN101	1-580-740-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL)		C511	1-124-477-11	ELECT 47uF 20% 25V	
* CN503	1-564-518-11	PLUG, CONNECTOR 3P		C701	1-126-768-11	ELECT 2200uF 20% 16V	
CN702	1-691-770-11	PLUG (MICRO CONNECTOR) 8P		C702	1-124-463-00	ELECT 0.1uF 20% 50V	
* CN802	1-568-824-11	SOCKET, CONNECTOR 5P		C703	1-162-294-31	CERAMIC 0.001uF 10% 50V	
*****				C704	1-124-477-11	ELECT 47uF 20% 25V	
*	1-647-249-11	HEADPHONE BOARD *****		C705	1-124-907-11	ELECT 10uF 20% 50V	
		< CONNECTOR >		C712	1-126-138-11	ELECT 4700uF 20% 50V	
* CN404	1-568-824-11	SOCKET, CONNECTOR 5P		C713	1-126-138-11	ELECT 4700uF 20% 50V	
		< JACK >		C714	1-124-903-11	ELECT 1uF 20% 50V	
J401	1-562-837-21	JACK (HEADPHONES)		C715	1-124-557-11	ELECT 1000uF 20% 25V	
*****				C716	1-124-557-11	ELECT 1000uF 20% 25V	
				C717	1-126-935-11	ELECT 470uF 20% 16V	
				C718	1-126-935-11	ELECT 470uF 20% 16V	
				C719	1-124-907-11	ELECT 10uF 20% 50V	
				C720	1-124-907-11	ELECT 10uF 20% 50V	
				C723	1-164-159-11	CERAMIC 0.1uF 50V	
				C724	1-164-159-11	CERAMIC 0.1uF 50V	
						< CONNECTOR >	
				CN401	1-691-766-11	PLUG (MICRO CONNECTOR) 4P	
				* CN403	1-568-824-11	SOCKET, CONNECTOR 5P	
				CN407	1-691-769-11	PLUG (MICRO CONNECTOR) 7P	

MAIN

MIC

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* CN601	1-568-834-11	SOCKET, CONNECTOR 15P		R512	1-249-405-11	CARBON 100 5% 1/4W F	
CN701	1-691-770-11	PLUG (MICRO CONNECTOR) 8P		R513	1-249-426-11	CARBON 5.6K 5% 1/4W	
* CN703	1-564-505-11	PLUG, CONNECTOR 2P		R514	1-249-441-11	CARBON 100K 5% 1/4W	
* CN801	1-568-824-11	SOCKET, CONNECTOR 5P		R515	1-249-426-11	CARBON 5.6K 5% 1/4W	
< DIODE >				R516	1-249-441-11	CARBON 100K 5% 1/4W	
D402	8-719-987-63	DIODE 1N4148M		R517	1-249-426-11	CARBON 5.6K 5% 1/4W	
D501	8-719-987-63	DIODE 1N4148M		R518	1-249-421-11	CARBON 2.2K 5% 1/4W F	
D502	8-719-987-63	DIODE 1N4148M		R519	1-249-441-11	CARBON 100K 5% 1/4W	
D503	8-719-001-91	DIODE UZL-15M		R551	1-249-435-11	CARBON 33K 5% 1/4W	
D504	8-719-987-63	DIODE 1N4148M		△R701	1-212-934-00	FUSIBLE 1 5% 1/2W F	
D505	8-719-987-63	DIODE 1N4148M		△R702	1-212-934-00	FUSIBLE 1 5% 1/2W F	
D506	8-719-200-82	DIODE 11ES2		< RELAY >			
D507	8-719-987-63	DIODE 1N4148M		RY401	1-515-765-11	RELAY	
D508	8-719-987-63	DIODE 1N4148M		*****			
D551	8-719-987-63	DIODE 1N4148M		*	A-4360-230-A	MIC BOARD, COMPLETE (AEP, UK)	
D701	8-719-200-02	DIODE 10E2		*****			
D702	8-719-200-02	DIODE 10E2		*	A-4360-244-A	MIC BOARD, COMPLETE (G, IT)	
< IC >				*****			
IC501	8-759-111-68	IC uPC1237HA		< CAPACITOR >			
IC502	8-759-103-93	IC uPC393C		C201	1-124-257-00	ELECT 2.2uF 20% 50V	
IC701	8-759-820-13	IC L78MR06		C202	1-162-294-31	CERAMIC 0.001uF 10% 50V	
IC702	8-759-231-58	IC M5F7812L		C203	1-162-286-31	CERAMIC 220PF 10% 50V	
IC703	8-759-245-86	IC TA7912S		C204	1-162-286-31	CERAMIC 220PF 10% 50V	
< TRANSISTOR >				C205	1-124-464-11	ELECT 0.22uF 20% 50V	
Q501	8-729-900-63	TRANSISTOR DTA124ES		C206	1-126-157-11	ELECT 10uF 20% 16V	
Q502	8-729-118-01	TRANSISTOR 2SB1116		C207	1-124-261-00	ELECT 10uF 20% 50V	
Q503	8-729-118-01	TRANSISTOR 2SB1116		C208	1-164-159-11	CERAMIC 0.1uF 50V	
Q603	8-729-620-05	TRANSISTOR 2SC2603-EF		C253	1-162-286-31	CERAMIC 220PF 10% 50V	
< RESISTOR >				C255	1-124-464-11	ELECT 0.22uF 20% 50V	
R430	1-249-438-11	CARBON 56K 5% 1/4W		C256	1-126-157-11	ELECT 10uF 20% 16V	
R431	1-249-417-11	CARBON 1K 5% 1/4W F		< CONNECTOR >			
R432	1-249-417-11	CARBON 1K 5% 1/4W F		* CN202	1-568-826-11	SOCKET, CONNECTOR 7P	
R433	1-215-891-11	METAL OXIDE 680 5% 2W F		< IC >			
R480	1-249-437-11	CARBON 47K 5% 1/4W		IC201	8-759-634-50	IC M5218AL	
R481	1-249-417-11	CARBON 1K 5% 1/4W F		< JACK >			
R482	1-249-417-11	CARBON 1K 5% 1/4W F		J201	1-562-837-21	JACK (MIC)	
R501	1-249-435-11	CARBON 33K 5% 1/4W		< RESISTOR >			
R502	1-249-441-11	CARBON 100K 5% 1/4W		R201	1-249-429-11	CARBON 10K 5% 1/4W	
R503	1-249-429-11	CARBON 10K 5% 1/4W		R202	1-249-417-11	CARBON 1K 5% 1/4W F	
R504	1-249-441-11	CARBON 100K 5% 1/4W		R203	1-249-441-11	CARBON 100K 5% 1/4W	
R505	1-249-437-11	CARBON 47K 5% 1/4W		R204	1-249-417-11	CARBON 1K 5% 1/4W F	
R506	1-249-430-11	CARBON 12K 5% 1/4W					
R508	1-249-429-11	CARBON 10K 5% 1/4W					
R509	1-249-429-11	CARBON 10K 5% 1/4W					
R510	1-249-429-11	CARBON 10K 5% 1/4W					
R511	1-249-417-11	CARBON 1K 5% 1/4W F					

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R205	1-249-438-11	CARBON 56K 5% 1/4W				< CONNECTOR >	
R206	1-249-409-11	CARBON 220 5% 1/4W F		* CN201	1-568-826-11	SOCKET, CONNECTOR 7P	
R207	1-249-429-11	CARBON 10K 5% 1/4W		* CN602	1-568-858-11	SOCKET, CONNECTOR 15P	
R208	1-249-438-11	CARBON 56K 5% 1/4W				< DIODE >	
R209	1-249-441-11	CARBON 100K 5% 1/4W		D101	8-719-987-63	DIODE 1N4148M	
R256	1-249-409-11	CARBON 220 5% 1/4W F		D151	8-719-987-63	DIODE 1N4148M	
*****				D603	8-719-987-63	DIODE 1N4148M	
	A-4360-229-A	PANEL BOARD COMPLETE (AEP)		D605	8-719-987-63	DIODE 1N4148M	
		*****		D606	8-719-301-37	LED SEL2210S-CD (ON/STANDBY)	
	A-4360-239-A	PANEL BOARD COMPLETE (UK)		D609	8-719-301-49	LED SEL2810A	
		*****				(DYNAMIC BASS SYSTEM)	
	A-4360-243-A	PANEL BOARD COMPLETE (G, IT)		D610	8-719-301-37	LED SEL2210S-CD (MUTING -20dB)	
		*****		D613	8-719-301-37	LED SEL2210S-CD (PHONO)	
				D614	8-719-301-37	LED SEL2210S-CD (TUNER)	
*	1-690-880-31	LEAD (WITH CONNECTOR)		D615	8-719-301-37	LED SEL2210S-CD (CD)	
		< CAPACITOR >		D616	8-719-301-37	LED SEL2210S-CD (MD/DAT)	
C102	1-124-257-00	ELECT 2. 2uF 20% 50V		D617	8-719-301-37	LED SEL2210S-CD (TAPE)	
C103	1-162-282-31	CERAMIC 100PF 10% 50V		D618	8-719-301-37	LED SEL2210S-CD (VIDEO)	
C104	1-162-282-31	CERAMIC 100PF 10% 50V		D703	8-719-200-82	DIODE 11ES2	
C105	1-124-257-00	ELECT 2. 2uF 20% 50V				< IC >	
C106	1-126-157-11	ELECT 10uF 20% 16V		IC101	8-759-634-50	IC M5218AL	
C107	1-124-465-00	ELECT 0. 47uF 20% 50V		IC601	8-759-163-92	IC MC68HC05P9SC405648B	
C108	1-136-165-00	FILM 0. 1uF 5% 50V		IC603	8-749-923-43	IC GPU57XB	
C109	1-126-301-11	ELECT 1uF 20% 50V		IC604	8-759-917-43	IC SN74HC138AN	
C110	1-162-282-31	CERAMIC 100PF 10% 50V				< TRANSISTOR >	
C152	1-124-257-00	ELECT 2. 2uF 20% 50V		Q101	8-729-141-26	TRANSISTOR 2SC3622A-LK	
C153	1-162-282-31	CERAMIC 100PF 10% 50V		Q102	8-729-202-67	TRANSISTOR 2SK246-GR3	
C154	1-162-282-31	CERAMIC 100PF 10% 50V		Q103	8-729-620-05	TRANSISTOR 2SC2603-EF	
C155	1-124-257-00	ELECT 2. 2uF 20% 50V		Q104	8-729-141-26	TRANSISTOR 2SC3622A-LK	
C156	1-126-157-11	ELECT 10uF 20% 16V		Q151	8-729-141-26	TRANSISTOR 2SC3622A-LK	
C157	1-124-465-00	ELECT 0. 47uF 20% 50V		Q152	8-729-202-67	TRANSISTOR 2SK246-GR3	
C158	1-136-165-00	FILM 0. 1uF 5% 50V		Q153	8-729-620-05	TRANSISTOR 2SC2603-EF	
C159	1-126-301-11	ELECT 1uF 20% 50V		Q154	8-729-141-26	TRANSISTOR 2SC3622A-LK	
C160	1-162-282-31	CERAMIC 100PF 10% 50V		Q601	8-729-900-36	TRANSISTOR DTC124ES	
C601	1-161-494-00	CERAMIC 0. 022uF 25V		Q602	8-729-620-05	TRANSISTOR 2SC2603-EF	
C603	1-162-306-11	CERAMIC 0. 01uF 20% 16V		Q605	8-729-900-80	TRANSISTOR DTC114ES	
C604	1-126-157-11	ELECT 10uF 20% 16V		Q606	8-729-900-61	TRANSISTOR DTA114ES	
C607	1-164-159-11	CERAMIC 0. 1uF 50V		Q607	8-729-900-63	TRANSISTOR DTA124ES	
C608	1-164-159-11	CERAMIC 0. 1uF 50V		Q608	8-729-900-69	TRANSISTOR DTA144WS	
C609	1-164-159-11	CERAMIC 0. 1uF 50V		Q609	8-729-900-80	TRANSISTOR DTC114ES	
C610	1-164-159-11	CERAMIC 0. 1uF 50V		Q610	8-729-900-63	TRANSISTOR DTA124ES	
C613	1-126-157-11	ELECT 10uF 20% 16V		Q613	8-729-900-36	TRANSISTOR DTC124ES	
C706	1-126-157-11	ELECT 10uF 20% 16V				< RESISTOR >	
		< FILTER >		R101	1-249-429-11	CARBON 10K 5% 1/4W	
CF601	1-577-358-21	VIBRATOR, CERAMIC (4MHz)		R102	1-249-433-11	CARBON 22K 5% 1/4W	
				R103	1-249-417-11	CARBON 1K 5% 1/4W F	

PANEL

POWER AMP

Ref.No.	Part No.	Description	Remark
R107	1-247-903-00	CARBON 1M 5% 1/4W	
R108	1-249-434-11	CARBON 27K 5% 1/4W	
R110	1-249-441-11	CARBON 100K 5% 1/4W	
R111	1-249-431-11	CARBON 15K 5% 1/4W	
R113	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R114	1-247-895-00	CARBON 470K 5% 1/4W	
R115	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R116	1-249-412-11	CARBON 390 5% 1/4W F	
R117	1-249-417-11	CARBON 1K 5% 1/4W F	
R118	1-249-429-11	CARBON 10K 5% 1/4W	
R151	1-249-429-11	CARBON 10K 5% 1/4W	
R152	1-249-433-11	CARBON 22K 5% 1/4W	
R153	1-249-417-11	CARBON 1K 5% 1/4W F	
R157	1-247-903-00	CARBON 1M 5% 1/4W	
R158	1-249-434-11	CARBON 27K 5% 1/4W	
R160	1-249-441-11	CARBON 100K 5% 1/4W	
R161	1-249-431-11	CARBON 15K 5% 1/4W	
R163	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R164	1-247-895-00	CARBON 470K 5% 1/4W	
R165	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R166	1-249-412-11	CARBON 390 5% 1/4W F	
R167	1-249-417-11	CARBON 1K 5% 1/4W F	
R168	1-249-429-11	CARBON 10K 5% 1/4W	
R602	1-249-433-11	CARBON 22K 5% 1/4W	
R604	1-249-417-11	CARBON 1K 5% 1/4W F	
R605	1-247-903-00	CARBON 1M 5% 1/4W	
R606	1-249-429-11	CARBON 10K 5% 1/4W	
R607	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R608	1-249-393-11	CARBON 10 5% 1/4W F	
R609	1-249-429-11	CARBON 10K 5% 1/4W	
R610	1-249-429-11	CARBON 10K 5% 1/4W	
R611	1-249-429-11	CARBON 10K 5% 1/4W	
R612	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R613	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R615	1-249-429-11	CARBON 10K 5% 1/4W	
R616	1-249-417-11	CARBON 1K 5% 1/4W F	
R617	1-249-413-11	CARBON 470 5% 1/4W F	
R619	1-249-417-11	CARBON 1K 5% 1/4W F	
R620	1-249-441-11	CARBON 100K 5% 1/4W	
R621	1-249-405-11	CARBON 100 5% 1/4W F	
R622	1-249-405-11	CARBON 100 5% 1/4W F	
R623	1-249-405-11	CARBON 100 5% 1/4W F	
R624	1-249-429-11	CARBON 10K 5% 1/4W	
R625	1-249-441-11	CARBON 100K 5% 1/4W	
R626	1-249-417-11	CARBON 1K 5% 1/4W F	
R627	1-249-405-11	CARBON 100 5% 1/4W F	
R628	1-249-411-11	CARBON 330 5% 1/4W	
R629	1-249-438-11	CARBON 56K 5% 1/4W	
R630	1-249-441-11	CARBON 100K 5% 1/4W	
R631	1-249-417-11	CARBON 1K 5% 1/4W F	

Ref.No.	Part No.	Description	Remark
R633	1-249-426-11	CARBON 5.6K 5% 1/4W	
R634	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R635	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R636	1-249-420-11	CARBON 1.8K 5% 1/4W F	
R637	1-247-834-11	CARBON 1.3K 5% 1/4W	
R703	1-249-417-11	CARBON 1K 5% 1/4W F	
< VARIABLE RESISTOR >			
RV101	1-223-336-11	RES, VAR, CARBON 50K/50K (LEVEL)	
RV201	1-241-813-11	RES, VAR, CARBON 50K (MIC LEVEL)	
RV202	1-223-201-11	RES, VAR, CARBON 100K/100K (FREQUENCY)	
< SWITCH >			
S601	1-572-184-11	SWITCH, KEYBOARD (SYSTEM POWER)	
S602	1-572-184-11	SWITCH, KEYBOARD (DYNAMIC BASS SYSTEM)	
S603	1-572-184-11	SWITCH, KEYBOARD (MUTING -20dB)	
S604	1-572-184-11	SWITCH, KEYBOARD (VIDEO)	
S605	1-572-184-11	SWITCH, KEYBOARD (MD/DAT)	
S606	1-572-184-11	SWITCH, KEYBOARD (TAPE)	
S607	1-572-184-11	SWITCH, KEYBOARD (CD)	
S608	1-572-184-11	SWITCH, KEYBOARD (TUNER)	
S609	1-572-184-11	SWITCH, KEYBOARD (PHONO)	

*	A-4360-235-A	POWER AMP BOARD (AEP)	

*	A-4360-240-A	POWER AMP BOARD (UK)	

*	A-4360-247-A	POWER AMP BOARD (G, IT)	

< CAPACITOR >			
C401	1-124-257-00	ELECT 2.2uF 20% 50V	
C402	1-162-286-31	CERAMIC 220PF 10% 50V	
C403	1-162-282-31	CERAMIC 100PF 10% 50V	
C404	1-126-967-11	ELECT 47uF 20% 50V	
C405	1-126-967-11	ELECT 47uF 20% 50V	
C406	1-124-122-11	ELECT 100uF 20% 50V	
C407	1-136-165-00	FILM 0.1uF 5% 50V	
C408	1-124-916-11	ELECT 22uF 20% 63V	
C409	1-136-165-00	FILM 0.1uF 5% 50V	
C410	1-136-163-00	FILM 0.068uF 5% 50V	
C411	1-136-163-00	FILM 0.068uF 5% 50V	
C412	1-126-967-11	ELECT 47uF 20% 50V	
C415	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C431	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C451	1-124-257-00	ELECT 2.2uF 20% 50V	

POWER AMP

POWER SUPPLY

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C452	1-162-286-31	CERAMIC 220PF 10% 50V		R424	1-249-437-11	CARBON 47K 5% 1/4W	
C453	1-162-282-31	CERAMIC 100PF 10% 50V		R425	1-249-417-11	CARBON 1K 5% 1/4W F	
C454	1-126-967-11	ELECT 47uF 20% 50V		R426	1-249-439-11	CARBON 68K 5% 1/4W	
C455	1-126-967-11	ELECT 47uF 20% 50V		R427	1-249-437-11	CARBON 47K 5% 1/4W	
C456	1-124-122-11	ELECT 100uF 20% 50V		R428	1-249-426-11	CARBON 5.6K 5% 1/4W	
C457	1-136-165-00	FILM 0.1uF 5% 50V		R429	1-249-433-11	CARBON 22K 5% 1/4W	
C460	1-136-163-00	FILM 0.068uF 5% 50V		R451	1-249-417-11	CARBON 1K 5% 1/4W F	
C461	1-136-163-00	FILM 0.068uF 5% 50V		R452	1-249-438-11	CARBON 56K 5% 1/4W	
< DIODE >				R453	1-249-416-11	CARBON 820 5% 1/4W F	
D401	8-719-987-63	DIODE 1N4148M		R454	1-249-438-11	CARBON 56K 5% 1/4W	
D451	8-719-987-63	DIODE 1N4148M		R455	1-249-425-11	CARBON 4.7K 5% 1/4W F	
< IC >				R456	1-249-425-11	CARBON 4.7K 5% 1/4W F	
IC401	8-749-900-24	IC STK-4162MK2		R457	1-249-425-11	CARBON 4.7K 5% 1/4W F	
< COIL >				R458	1-249-425-11	CARBON 4.7K 5% 1/4W F	
L401	1-420-872-00	COIL, AIR CORE		△R459	1-212-881-11	FUSIBLE 100 5% 1/4W F	
L451	1-420-872-00	COIL, AIR CORE		△R460	1-217-151-00	RES, METAL PLATE 0.22 2W	
< TRANSISTOR >				R461	1-249-417-11	CARBON 1K 5% 1/4W F	
Q401	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R462	1-249-431-11	CARBON 15K 5% 1/4W	
Q402	8-729-900-80	TRANSISTOR DTC114ES		R463	1-249-441-11	CARBON 100K 5% 1/4W	
Q403	8-729-620-05	TRANSISTOR 2SC2603-EF		R468	1-249-397-11	CARBON 22 5% 1/4W F	
Q451	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R469	1-249-397-11	CARBON 22 5% 1/4W F	
< RESISTOR >				R470	1-249-397-11	CARBON 22 5% 1/4W F	
R401	1-249-417-11	CARBON 1K 5% 1/4W F		R471	1-249-397-11	CARBON 22 5% 1/4W F	
R402	1-249-438-11	CARBON 56K 5% 1/4W		*****			
R403	1-249-416-11	CARBON 820 5% 1/4W F		POWER SUPPLY BOARD			
R404	1-249-438-11	CARBON 56K 5% 1/4W		*****			
R405	1-249-425-11	CARBON 4.7K 5% 1/4W F		< CAPACITOR >			
R406	1-249-425-11	CARBON 4.7K 5% 1/4W F		C708	1-136-165-00	FILM 0.1uF 5% 50V	
R407	1-249-425-11	CARBON 4.7K 5% 1/4W F		C709	1-136-165-00	FILM 0.1uF 5% 50V	
R408	1-249-425-11	CARBON 4.7K 5% 1/4W F		C710	1-130-483-00	MYLAR 0.01uF 5% 50V	
△R409	1-212-881-11	FUSIBLE 100 5% 1/4W F		C711	1-130-483-00	MYLAR 0.01uF 5% 50V	
△R410	1-217-151-00	RES, METAL PLATE 0.22 2W		< DIODE >			
R411	1-249-417-11	CARBON 1K 5% 1/4W F		D706	8-719-200-02	DIODE 10E2	
R412	1-249-431-11	CARBON 15K 5% 1/4W		D707	8-719-200-02	DIODE 10E2	
R413	1-249-441-11	CARBON 100K 5% 1/4W		D708	8-719-200-02	DIODE 10E2	
R414	1-249-421-11	CARBON 2.2K 5% 1/4W F		D709	8-719-200-02	DIODE 10E2	
R415	1-249-421-11	CARBON 2.2K 5% 1/4W F		D710	8-719-200-82	DIODE 11ES2	
R416	1-249-421-11	CARBON 2.2K 5% 1/4W F		D711	8-719-200-82	DIODE 11ES2	
R417	1-249-421-11	CARBON 2.2K 5% 1/4W F		D712	8-719-312-09	DIODE RBA-402	
R418	1-249-397-11	CARBON 22 5% 1/4W F		< RESISTOR >			
R419	1-249-397-11	CARBON 22 5% 1/4W F		△R706	1-212-934-00	FUSIBLE 1 5% 1/2W F	
R420	1-249-397-11	CARBON 22 5% 1/4W F		△R707	1-212-934-00	FUSIBLE 1 5% 1/2W F	
R421	1-249-397-11	CARBON 22 5% 1/4W F		R708	1-249-429-11	CARBON 10K 5% 1/4W	
R422	1-249-429-11	CARBON 10K 5% 1/4W		R709	1-249-429-11	CARBON 10K 5% 1/4W	
R423	1-247-881-00	CARBON 120K 5% 1/4W		*****			

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

PRIMARY

SECONDARY

SENSOR

SPEAKER TERMINAL

VOL

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
*	1-647-246-11	PRIMARY BOARD *****				< TERMINAL >	
		*****		TM401	1-537-445-11	TERMINAL BOARD (SP) (FRONT SPEAKER)	
		*****				*****	
		SECONDARY BOARD *****				VOL BOARD *****	
		*****				< CAPACITOR >	
*	1-647-251-11	SENSOR BOARD *****		C606	1-162-306-11	CERAMIC 0.01uF 20% 16V	
		< CAPACITOR >		C611	1-164-159-11	CERAMIC 0.1uF 50V	
C512	1-164-159-11	CERAMIC 0.1uF 50V				< CONNECTOR >	
		< CONNECTOR >		CN405	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
* CN502	1-564-518-11	PLUG, CONNECTOR 3P				< DIODE >	
		< IC >		D102	8-719-200-82	DIODE 11ES2	
IC503	8-759-947-34	IC LM35DZ				< IC >	
		*****		IC602	8-759-820-62	IC LB1639	
*	1-647-248-11	SPEAKER TERMINAL BOARD *****				< VARIABLE RESISTOR >	
		< CAPACITOR >		RV103	1-223-200-11	RES, VAR, CARBON 10K/100K/100K (VOLUME)	
C416	1-136-163-00	FILM 0.068uF 5% 50V (G, IT)				*****	
C417	1-136-163-00	FILM 0.068uF 5% 50V (G, IT)				MISCELLANEOUS *****	
C466	1-136-163-00	FILM 0.068uF 5% 50V (G, IT)		4	1-590-033-11	WIRE, FLAT TYPE (7 CORE)	
C467	1-136-163-00	FILM 0.068uF 5% 50V (G, IT)		10	1-751-032-11	WIRE (FLAT TYPE) (15 CORE)	
		< CONNECTOR >		12	1-575-662-11	WIRE, FLAT TYPE (5 CORE)	
CN402	1-691-766-11	PLUG (MICRO CONNECTOR) 4P		64	1-751-023-11	WIRE (FLAT TYPE) (5 CORE)	
		< JACK >		△F701	1-532-259-00	FUSE, TIME-LAG (T1.6A)	
J402	1-568-572-11	JACK, PIN 2P (SURROUND SPEAKER)		M901	1-541-953-11	MOTOR, DC FAN	
		< RESISTOR >		△T901	1-423-531-11	TRANSFORMER, POWER (AEP, G, IT)	
R434	1-249-397-11	CARBON 22 5% 1/4W F (G, IT)		△	1-423-532-11	TRANSFORMER, POWER (UK)	
R435	1-249-397-11	CARBON 22 5% 1/4W F (G, IT)				*****	
R484	1-249-397-11	CARBON 22 5% 1/4W F (G, IT)				*****	
R485	1-249-397-11	CARBON 22 5% 1/4W F (G, IT)				HARDWARE LIST *****	
				#1	7-682-547-09	SCREW +BVTT 3X6 (S)	
				#2	7-682-548-04	SCREW +BVTT 3X8 (S)	
				#3	7-685-647-71	SCREW +BVTP 3X10 TYPE2 IT-3	
				#4	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
				#5	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
				#6	7-685-871-01	SCREW +BVTT 3X6 (S)	

The components identified by mark
△ or dotted line with mark △ are
critical for safety.
Replace only with part number
specified.

Sony Corporation
Audio Group

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